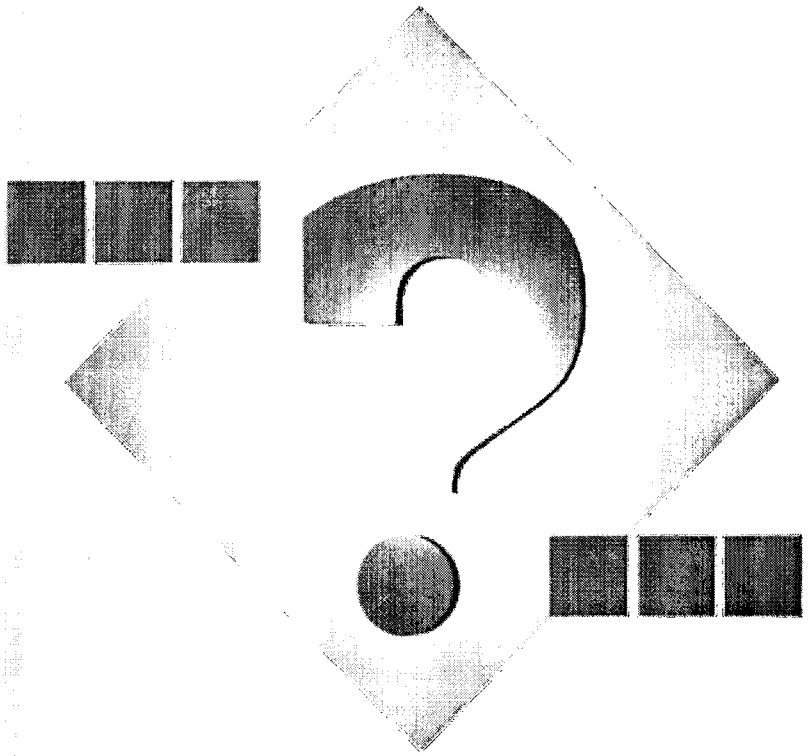
DOCUMENT RESUME

ED 472 820 EA 032 218

TITLE	Asking the Right Questions: A Leader's Guide to Systems Thinking about School Improvement.
INSTITUTION	Mid-Continent Research for Education and Learning, Aurora, CO.
SPONS AGENCY	Office of Educational Research and Improvement (ED), Washington, DC.
PUB DATE	2000-00-00
NOTE	39p.
CONTRACT	RJ96006101
AVAILABLE FROM	Mid-Continent Research for Education and Learning, 2550 South Parker Road, Suite 500, Aurora, CO 80014. Tel: 303-337-0990; Fax: 303-337-3005; e-mail: info@mcrel.org; Web site: http://www.mcrel.org. For full text: http://www.mcrel.org/PDF/SchoolImprovementReform/AskingRightQuestions.pdf.
PUB TYPE	Guides - Non-Classroom (055)
EDRS PRICE	EDRS Price MF01/PC02 Plus Postage.
DESCRIPTORS	*Administrator Guides; *Educational Improvement; Elementary Secondary Education; Models; *Program Development; *Systems Approach; *Systems Development

ABSTRACT

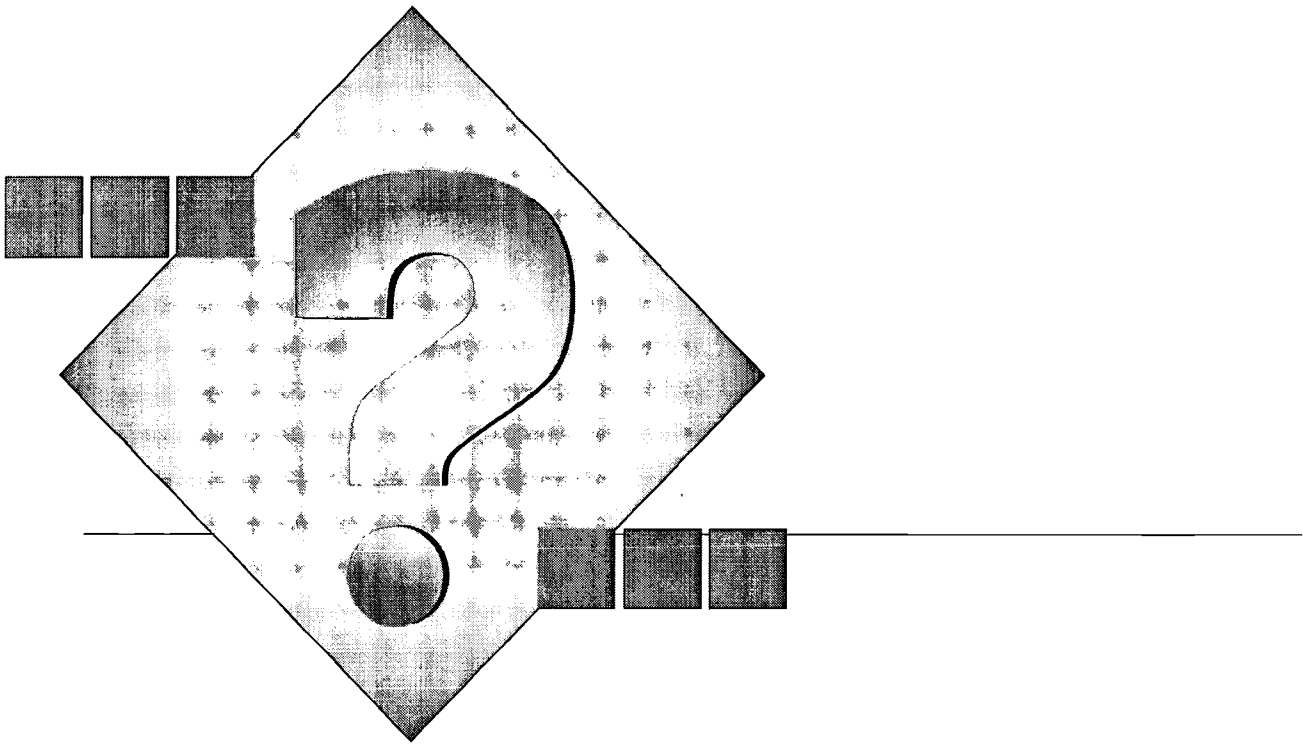
This guidebook is designed to help school leaders think systemically as they examine school improvement issues and make decisions about change. The guidance offered is based on what has been learned from systems theory, research on school improvement, and conversations with a broad array of school leaders. Because schools are complex systems of interacting components, a small change in one part of the system may lead to significant changes in other parts or throughout the entire school. This guidebook offers a simpler process that school leaders can use to organize their thinking about school change, and thus, make better decisions. Three facets or "domains" of school systems are defined--the Technical Domain, Personal Domain, and Organizational Domain--as simplifying perspectives. To address change effectively, the three-step process of: (1) identifying and clarifying the proposed reform initiative; (2) using guiding questions for each domain to create specific questions; and (3) considering possible actions to take in response to the specific questions asked is explained. Process models are discussed that involve implementing standards in the classroom, linking staff development to student learning, and responding to accountability demands. (Contains 25 references.) (RT)



ASKING THE RIGHT QUESTIONS:

A Leader's Guide to Systems Thinking about School Improvement

McREL



ASKING THE RIGHT QUESTIONS:

A Leader's Guide to Systems Thinking about School Improvement

McREL

September 2000

To order a copy of *Asking the Right Questions: A Leader's Guide to Systems Thinking about School Improvement*, contact McREL:

Mid-continent Research for Education and Learning
2550 S. Parker Road, Suite 500
Aurora, CO 80014-1678
phone: (303) 337-0990
fax: (303) 337-3005
e-mail: info@mcrel.org
web site: http://www.mcrel.org

This publication is based on work sponsored wholly, or in part, by the Office of Educational Research and Improvement (OERI), U.S. Department of Education, under Contract Number #RJ96006101. The content of this publication does not necessarily reflect the views of OERI, the Department, or any other agency of the U.S. government.

Table of Contents

Acknowledgements

The document that follows is the result of many hours of interviews, research, thought, and writing on the part of a number of people. Helen Ryley conducted interviews with school leaders and prepared an initial draft. McREL staff members Bryan Goodwin and Barbara Gaddy were instrumental in conceptualizing, writing, and bringing it to fruition as a guide for school leaders. In addition, many principals and administrators took time from their busy schedules to offer insights, suggestions, and "real-world" examples of systemic thinking. The contributions of these individuals not only made this guide possible, but stronger.

James Bailey, *Principal, Smith High School, Sterling, CO*
Roger Boettcher, *Principal, John Dewey Middle School, Denver, CO*
Connie Brodt, *Principal, Niwot Elementary, Niwot, CO*
Michael Clough, *Superintendent, Wiley School District, Wiley, CO*
Jim Cook, *Principal, Skyline High School, Longmont, CO*
Pam Durr, *Consultant, Denver, CO*
Ann Foster, *Director, Research & Development Center, Poudre SD, Ft. Collins, CO*
Linda Gleckler, *Director, Title I, Thompson School District, Loveland, CO*
Mary Ann Goshert, *Director of Elementary Education, Cañon City Public Schools, Cañon City, CO*
Candy Hyatt, *Mapleton Elementary, Boulder, CO*
Bobbie Johnson, *Director of Assessment, Thompson School District, Loveland, CO*
Don June, *Asst. Principal, Conrad Ball Middle School, Loveland, CO*
Marilyn Kolstoe, *Asst. Principal, Loveland High School, Loveland, CO*
Lin Kuzmich, *Principal, B.F. Kitchen Elementary, Loveland, CO*
Jean Lovelace, *Principal, Southwest BOCES Alternative High School, Cortez, CO*
Michael O'Donnell, *Principal, Hygiene Elementary, Longmont, CO*
Chris Rugg, *Principal, Sunset Middle School, Longmont, CO*
Chuck Scott, *Principal, John Mall High School, Walsenburg, CO*
Jan Silverstein, *Director, Goals 2000, Colorado Department of Education, Denver, CO*
Nancy Sutton, *Principal, Manual High School, Denver, CO*
Connie Syferd, *Principal, Eagle Crest Elementary, Longmont, CO*

Change is a complex process, not easily dealt with in a straightforward manner. Yet the combined efforts of this team of individuals contributed to the creation of a unique document — a practical guide for accomplishing an often difficult and abstract task: thinking systemically about school improvement efforts.

Louis F. Cicchinelli, Ph.D.
Executive Vice President and Deputy Director
Mid-continent Research for Education and Learning
August 2000

Thinking Systemically

This guidebook is designed to help school leaders, particularly principals, think systemically as they examine school improvement issues and make decisions about change. It can be used individually, with colleagues, or with an entire school staff. The guidance offered in this manual is based on what we have learned from systems theory and the research on school improvement. It has also been drawn from conversations with a broad array of school leaders who shared their experiences, insights, and advice about the factors they considered as they embarked on the process of school reform. We hope you find this guide helpful, whether you are a veteran leader or have just stepped into a school leadership role.

Schools as Systems

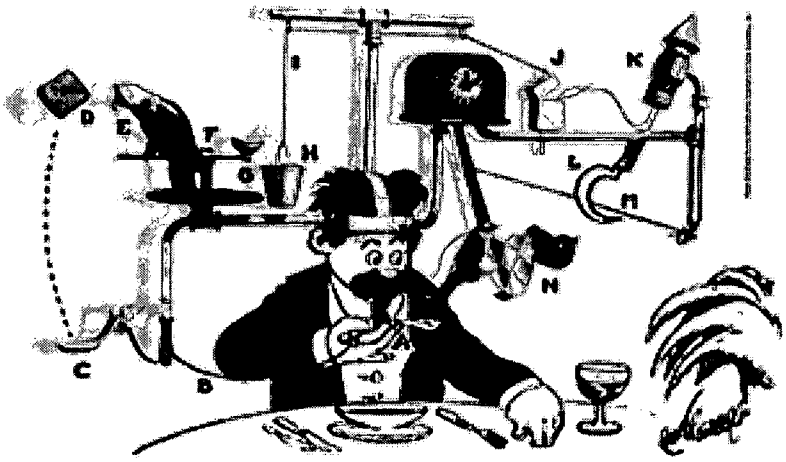
The notion of systems thinking is not a new one; it has been around for decades. In large part, systems theory owes its origins to the study of ecology, through which scientists have discovered that complex webs of life exist throughout nature. They observed that seemingly minor changes or additions to natural systems can have dramatic and unforeseen effects. For example, in Hawaii, the introduction of feral pigs has severely altered the island's ecosystem. The pigs eat rare plants that native birds depend on for nectar. Through their digging, the pigs create large puddles which breed disease-carrying mosquitoes that further decimate the bird population. To make matters worse, the pigs spread the seeds of non-native vines that eventually choke out trees in the forest (Dolan, n.d.).

Similarly, small changes in human systems, such as schools, often have complex and unforeseen effects. For example, a seemingly straightforward change from grade-letter student report cards to more detailed reports on student competencies may have numerous ramifications. For starters, teachers may need training to ensure they adopt the new format as intended. District assessments may need to be revamped to ensure they measure the elements of student progress that will be reported. And parents may need guidance on how to interpret the new format. As a result, resources may be required to train teachers, modify assessments, and communicate with parents. Moreover, new processes may need to be developed for recording, reporting, and communicating data as feedback to teachers, students, and parents.

Despite the neat, pyramid-type structure often ascribed to schools through organizational charts, schools tend to operate much more like living systems. The parts of a system function more like dynamic and complex webs of interactive loops, rather than as compartmentalized units following clear chains of command, like cogs in a machine. Thus, a major component of systems thinking is looking for the connections in the system (Beckhard & Pritchard, 1992), that is, the ways in which changes to one part might affect, and be affected by, other parts of the system.

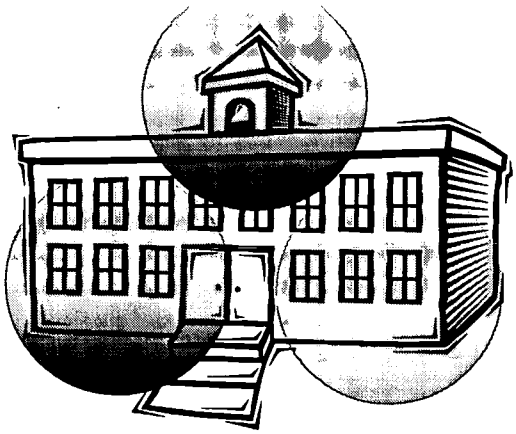
Although systems theory better describes the inner-workings of school communities, Patterson (1993) notes that "the language and tools of systems thinking have been by and large obscured in complex and intricate formulas and diagrams" (p. 66). In short, it is easy to get so wrapped up in the complexity of school systems that one ends up with a hyper-complicated vision of school improvement, like one of cartoonist Rube Goldberg's "inventions"— rather than a clear vision to guide a school through change.

After interviewing more than 20 school leaders, we learned that thinking systemically is often easier said that done. School systems are so complex and expansive that it is often difficult for school leaders to be certain whether they are truly considering all the elements of the system when making changes to the system.



Like cartoonist Rube Godlberg's self-operating napkin, many systems models are overly complex.

Thus, the purpose of this guidebook is to offer a simpler process that school leaders can use to think systemically about their schools. To facilitate this discussion, we use an organizer from Cordell and Waters (1993), who define three major facets or "domains" of school systems: the Technical Domain, the Personal Domain, and the Organizational Domain. These domains can be thought of as "lenses" that school leaders can use to view their school systems in order to simplify their complexity. Obviously, this is not the only way to view a school system. But the three perspectives in this framework can help school leaders organize their thinking about school change, and, thus, make better decisions.



The Technical Domain

The Technical Domain of a school system includes what students learn, how they are taught, and the methods that are used to assess their acquisition of new knowledge and skills. Simply stated,

this domain consists of "the stuff" of schooling.
Improvement efforts that center around this domain might include developing standards and benchmarks for various grade levels, aligning curricula with standards, identifying effective instructional strategies, and redesigning assessments to better measure student achievement and progress. In this guidebook, we consider the following components of education to be part of the "technical" domain:

- Standards
- Curriculum
- Instruction
- Assessment

The Personal Domain

The Personal Domain of a school system refers to the affective part of the system; that is, issues related to the attitudes, skills, and behaviors of the people in the system. This includes school and district leadership, professional development activities, communication, and the personal relationships among students, teachers, and administrators, as well as the culture these factors collectively create.

Improvement efforts that revolve closely around this domain include ensuring that students and teachers view tasks as meaningful and personally relevant, that positive school and classroom climates support learning, and that students' and teachers' voices are heard and respected. In this guidebook, we consider the following components to be part of the "personal" domain:

- Staff Development
- Leadership & Supervision
- Internal Communication
- Climate & Culture

The Organizational Domain

The Organizational Domain of a school system refers to the "resources and structures of the system" in which teaching and learning occur. Issues related to this domain include the system's external environment (e.g., changing demographics, state mandates), stakeholders (e.g., parents, community members), resources, technology, and accountability requirements.

Improvement efforts that relate most closely to this domain include finding ways to involve stakeholders in school improvement efforts, encouraging teachers to integrate technology into instruction, and evaluating emerging government regulations or changes in the public's view of education (e.g., parents' concerns about quality). In this guidebook, we define the following aspects of education to be part of the "organizational" domain:

- External Environment
- Stakeholders
- Resource Allocation
- Technology

- Accountability

Core Purpose, Goals, and Principles

As Exhibit 1 illustrates, the school community's purpose, goals, and guiding principles are the central ideas around which every aspect of the system should revolve. Also, as the radiating grid lines in this figure are intended to show, a school system is a complex web of interactions. Exhibit 1 also introduces a color scheme used throughout this guidebook. Teal denotes the technical domain, purple denotes the personal domain, and brown denotes the organizational domain.

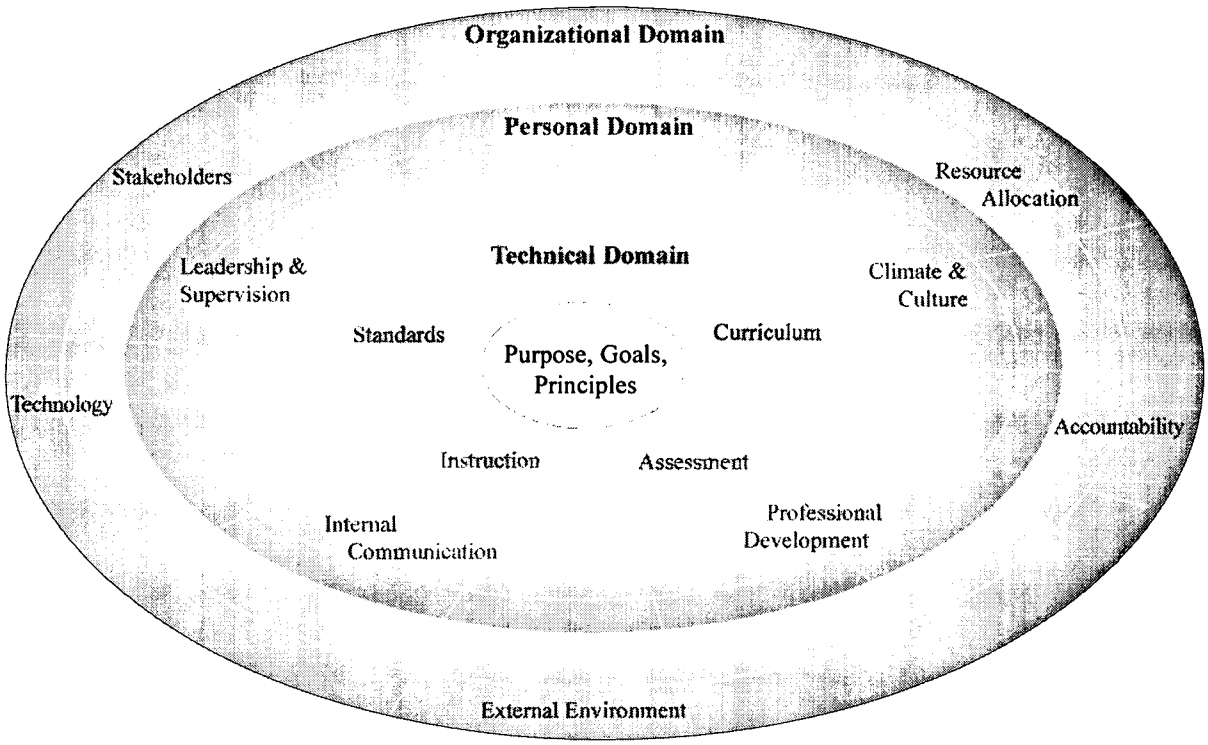


Exhibit 1
Domains of School Systems

A THREE-STEP PROCESS

As Ohle and Morley (1994) note, "when we slow down and examine a problem, we increase the chances of solving the right problem once instead of the wrong problem a dozen times. [Thoughtful] solutions are more effective and often much less expensive (both in dollars and time)" (p. 3). In practice, this may be easier said than done, especially in complex systems like schools. But even though the consequences of every change cannot be anticipated, the likelihood of unintended consequences can be reduced by using a three-step inquiry, or questioning, process to help illuminate the interconnectedness of a school system:

Step 1. Identify and clarify the proposed reform initiative.
Step 2. Use guiding questions for each domain to create specific questions.
Step 3. Consider possible actions to take in response to the specific questions asked.

Step 1: Identify the Initiative

Before making any changes in a school system, it is essential to conduct a data-based needs assessment. This is a critical preliminary step that should not be skipped. School leaders must take the time to gather and reflect on student performance data and consider input from teachers, staff members, parents, and other stakeholders. This early assessment process helps ensure that reform initiatives are directed to the right issues, saving valuable time and resources in the long run. A number of publications are available to help identify school or district needs, including the North Central Regional Educational Laboratory's (Hassel, 1998) *Comprehensive School Reform: Making Good Choices*, a guidebook for conducting a school self-assessment.

In addition to carefully identifying and articulating the reform initiative, it is also necessary to specify intended outcomes. Having a clear vision of what you are trying to accomplish will help you identify the aspects of the system that might support or hinder reaching those goals.

Step 2: Use Guiding Questions to Create Specific Questions

After identifying a reform strategy and goals, the next step is to consider the possible ripple effects of the changes across the domains (technical, personal, and organizational) of the system. Posing questions is a powerful tool to use during this step. Exhibit 2 includes a guiding question that can be used for each domain. Collectively, these questions can help school leaders and other stakeholders consider the implications of reform for the entire school system.

You may also find it helpful to refer back to the components of each domain and to reflect upon the possible implications the change initiative might have for these components — as well as the implications those components might have for the initiative. Examining all 13 components of the system can help school leaders take the entire school system into account when planning and carrying out school improvement efforts. That is not to say, however, that there will necessarily be important implications for every one of these components. Indeed, the examples provided in the following pages of this guidebook do not address every single component of the system since

some components have more salient implications and effects than others. Nonetheless, it is worthwhile to take a comprehensive look at the system, to reduce, as much as possible, the chances of an unintended consequence or unforeseen outcome derailing reform efforts.

To ensure that your questions are as thought-provoking as possible, it is also valuable to make sure that they are phrased in a way that elicits more than a simple "yes" or "no" answer. For example, instead of asking whether professional development efforts help teachers raise student reading scores, it might be more useful to ask how staff development can help teachers raise student reading scores.

Domain	Description	Components	Guiding Question
Technical	The content of schooling	Standards Curriculum Instruction Assessment	What are the implications of this initiative for what and how students learn and how we assess their progress?
Personal	The attitudes and skills of the people in the system	Staff Development Leadership and Supervision Internal Communication Climate and Culture	Will our attitudes and skills contribute to the success of this initiative?
Organizational	The resources and structures of the system	External Environment Stakeholders Resource Allocation Technology Accountability	Will our organizational supports contribute to the success of this initiative?

Exhibit 2
Education System Domains and Guiding Questions

Step 3: Consider Possible Actions

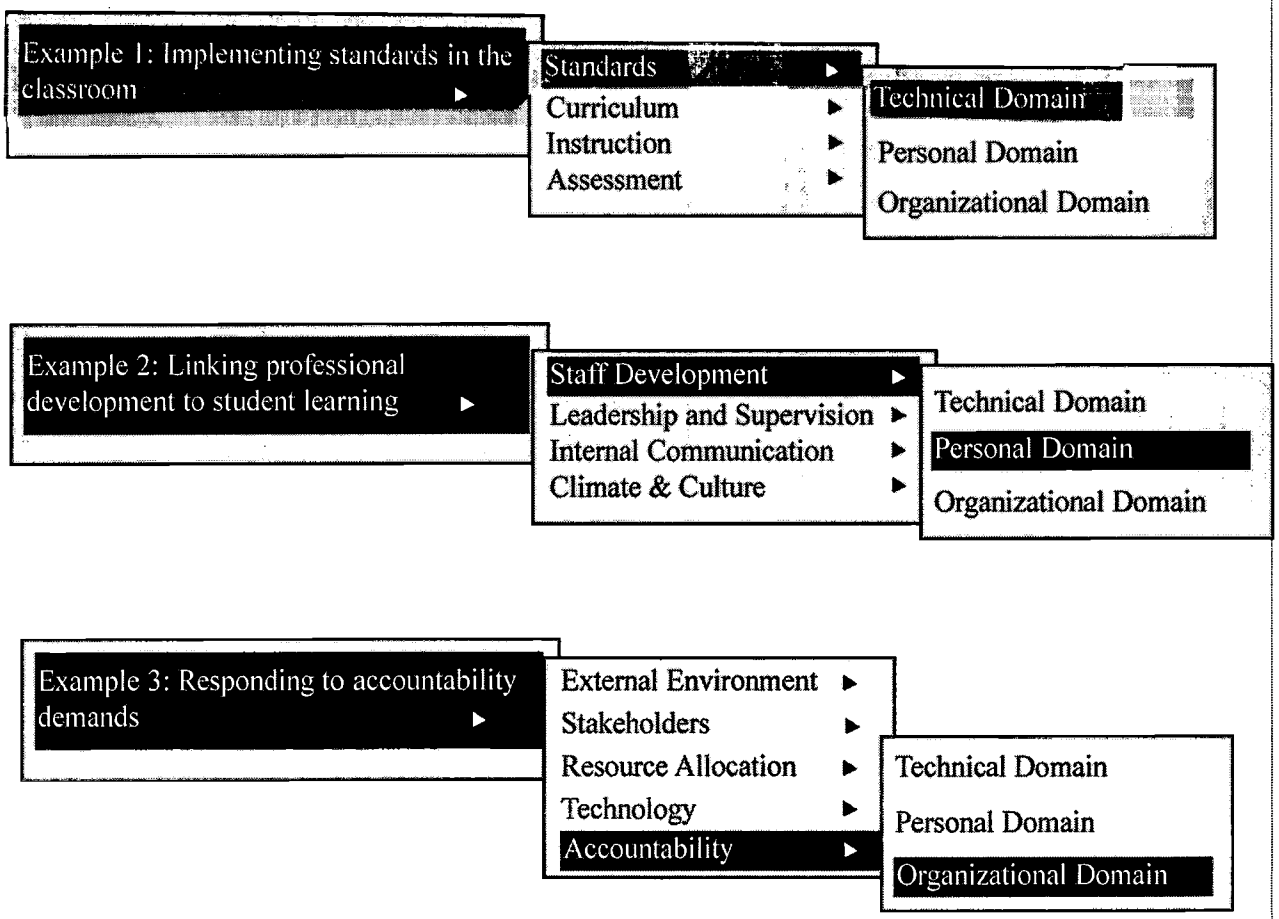
As shown in Exhibit 3, asking thoughtful questions about each component of the system should lead to actions that better align the system in support of reform efforts or head-off negative consequences of reform. This is the most important part of this process. Simply "sitting and thinking" about school improvement is a waste of time if it does not yield tangible actions. Considering the possible implications of each component of each domain and the actions to take may require examining pertinent research literature or talking to other school leaders who have gone through a similar reform effort. This process is illustrated in the following pages, which apply this inquiry process to three example reform initiatives to show how posing domain-specific questions can lead to meaningful action.

Exhibit 3
A Three-Step Process of Systems Thinking

Modeling the Process

The following sections provide three detailed examples of the sort of school improvement initiatives that schools are likely to undertake without fully examining the systemic implications of their efforts. As Exhibit 4 demonstrates, we have chosen three initiatives that are closely related to particular components in each of the three domains. However, even though these initiatives may initially appear to "begin" in only one particular domain, they are carried out in all three domains. This is one of the key messages of this guidebook.

Exhibit 4
Example Reform Initiatives
Related Components and System Domains

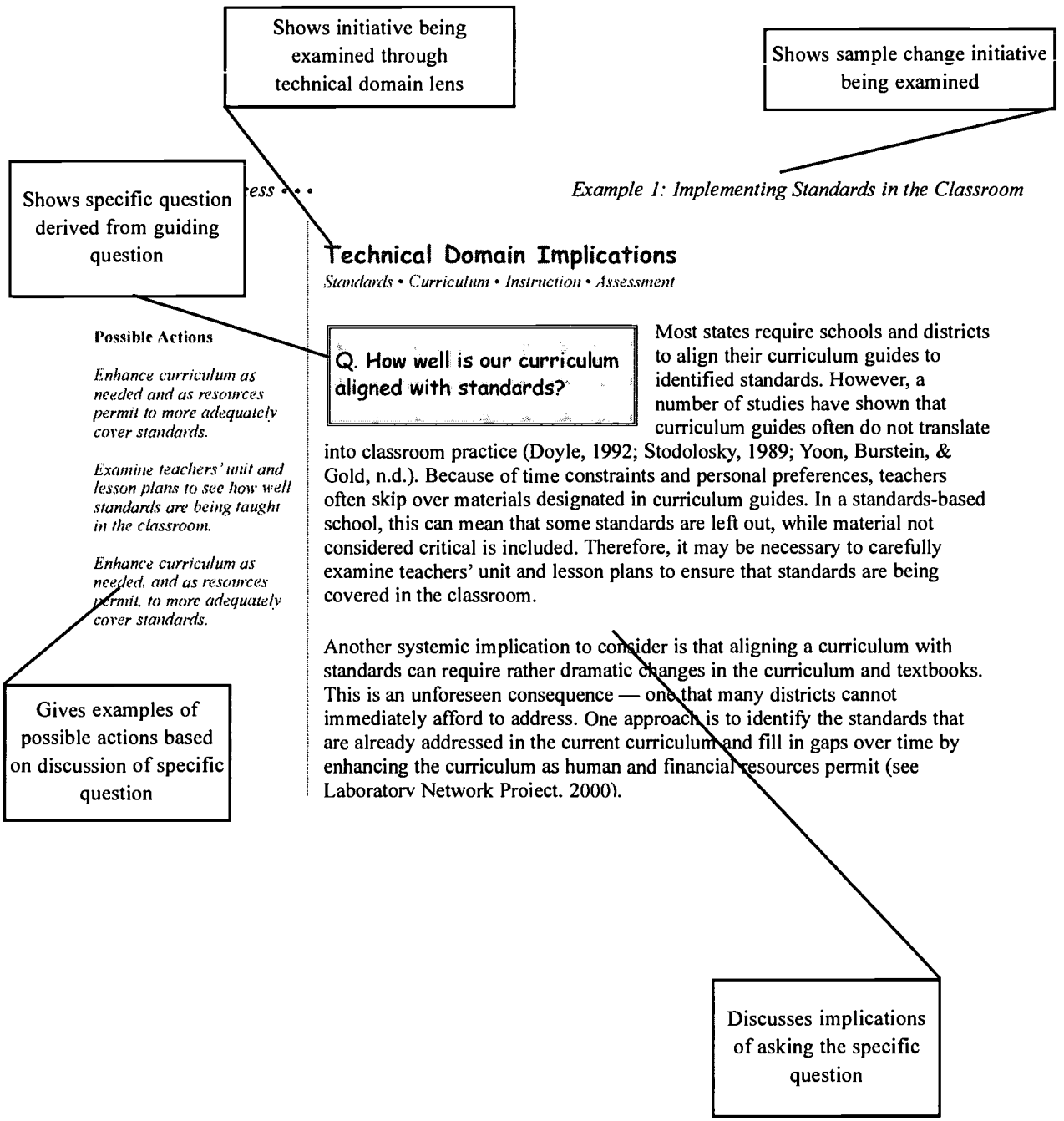


As readers also no doubt will notice, many of the possible courses of action suggested in the following sections do not fit neatly into the domains in which they are presented. For example, although professional development is often needed to help teachers improve curricula and instruction, a *technical domain* concern, providing teachers with the training they need to do their jobs well can have a positive effect on school climate, a *personal domain* concern. Similarly, team-teaching strategies can have a positive effect on school climate and professional development, *personal domain* concerns. At the same time, these strategies make teachers more accountable to one another, creating an informal accountability system, an *organizational domain* issue. The domains described here are not so much containers, but rather lenses with which to view the system. Each lens accentuates a different part of an interconnected system.

As you read these examples, you may also find yourself concluding that systems thinking is not an entirely new concept. Indeed, effective school leaders have long displayed the ability to step back to see the bigger picture and the wider implications of reform without ever consciously thinking about or alluding to systems theory. The point of this guidebook is not to tout systemic thinking as a dramatic departure from what successful school leaders have modeled in the past. Rather, it is an attempt to describe, as simply as possible, a pattern of thinking that these leaders use, consciously or unconsciously, to make good decisions about change in complex systems. For many leaders, this ability has most likely developed through trial and error and much experience dealing with unforeseen consequences. We hope that by using this guidebook, readers will be able to shorten their own learning curve toward becoming highly effective school leaders.

The following pages consider three examples of school change initiatives — each one related to a different domain of the system. As shown in Exhibit 5, we then move through the three domains, reworking guiding questions for each domain (see page 6) into more specific questions related to the initiative at hand. All three examples are examined through the "lenses" of the three domains. As Exhibit 5 shows, we use several graphics as visual cues to indicate the part of the system being examined. Also, although possible actions are suggested, they are not offered as a definitive list of all possible courses of action. Rather, they are offered in large part to demonstrate that systemic thinking involves much more than just contemplating connections within a school system. It involves taking action.

Exhibit 5
Modeling the Process: Sample Page



Example 1: Implementing Standards in the Classroom

Academic standards are a central focus of U.S. education. Whether motivated by the national standards conversation, state accountability requirements, or a desire to clearly identify what students should learn, school leaders across the country are grappling with the implications of adopting standards. Regardless of where schools are in the process, leaders are beginning to see that standards have widespread implications for their school systems. One district administrator put it this way:

> *"Our initial perception about standards was fairly narrow. We thought we'd modify the curriculum a bit, and we'd be done. But now we realize that standards affect everything — from communications with parents, to grading, to staff development. Now that we have standards, teachers are focusing more on what students are learning and why. They're reexamining how they teach, which is raising staff development issues. The ripple effects go way beyond what most of us originally imagined."*

Step 1: Identify the Initiative

During the past few years, there has been an almost constant flurry of activity surrounding standards. States and districts have both undertaken, and in some cases, are still undertaking, the arduous task of identifying standards. A number of districts have also revised their curriculum guides and large-scale assessments to reflect new standards.

However, all of these efforts do not necessarily translate into standards being implemented in the classroom. In many cases, teachers' practices have changed little in light of standards. As a result, a number of districts are now looking for ways to ensure that standards have a positive effect where they matter most — in the classroom. In this section, we presume that a school or district has undertaken a needs assessment and discovered that they now need to focus their efforts on implementing standards in the classroom.

Step 2: Use Guiding Questions to Create Specific Questions

After identifying and articulating the initiative at hand, the next step of the process is to translate the guiding questions for each domain into more specific questions, as shown in Exhibit 6. As noted earlier and highlighted in Exhibit 6, these specific questions are derived in part from a careful examination of each component of the system. These questions are offered here not as a comprehensive list of all the issues school leaders should think about when implementing standards in the classroom, but rather as examples of the diverse issues that schools and districts typically must address as they adopt a standards-based approach in the classroom.

Exhibit 6
Step 2: Use Guiding Questions to Create Specific Questions

REFORM INITIATIVE: IMPLEMENTING STANDARDS IN THE CLASSROOM

Guiding question	System components	Specific questions
Technical Domain What are the implications of this initiative for what and how students learn and how we assess their progress?	Standards	How well is our current curriculum aligned with standards?
	Curriculum	What implications do standards have for teachers' instructional methods?
	Instruction	To what extent are teachers able to design effective standards-based classroom assessments?
	Assessment	
Personal Domain Will our attitudes and skills contribute to the success of this initiative?	**Staff Development**	What **staff development** experiences do teachers need to use standards effectively?
	Leadership & Supervision	What **leadership** support is needed to help us implement standards in the classroom?
	Internal Communication	How can we create a **school culture** that supports standards?
	Climate & Culture	
Organizational Domain Will our organizational support systems contribute to the success of this initiative?	External Environment	How will we communicate students' progress on standards to **stakeholders**, in particular, parents?
	Stakeholders	How can we better use **resources** to support the implementation standards in the classroom?
	Resource Allocation	How can our **accountability** system provide teachers with adequate incentives to create standards-based classrooms?
	Technology	
	Accountability	

Step 3: Consider Possible Actions

By asking the kinds of specific questions suggested in Exhibit 6, school leaders can get a big picture of the far-reaching effect of tying standards to classroom lessons, units, and assessments. The guidance provided in this section is drawn from a variety of sources, including conversations with school leaders, research findings, the experiences of McREL staff in the field, and McREL's publication *Designing Standards-Based Districts, Schools, and Classrooms* (Marzano & Kendall, 1996). Again, the questions and guidance offered in this section are by no means a comprehensive list of all the relevant systemic issues. Rather, they are intended to stimulate thinking about the ripple effects that implementing standards can have throughout a school system.

Technical Domain Implications

Standards • Curriculum • Instruction • Assessment

Q. How well is our curriculum aligned with standards?

Possible Actions

Enhance curriculum as needed and as resources permit to more adequately cover standards.

Examine teachers' unit and lesson plans to see how well standards are being taught in the classroom.

Enhance curriculum as needed, and as resources permit, to more adequately cover standards.

Most states require schools and districts to align their curriculum guides to identified standards. However, a number of studies have shown that curriculum guides often do not translate into classroom practice (Doyle, 1992; Stodolosky, 1989; Yoon, Burstein, & Gold, n.d.). Because of time constraints and personal preferences, teachers often skip over materials designated in curriculum guides. In a standards-based school, this can mean that some standards are left out, while material not considered critical is included. Therefore, it may be necessary to carefully examine teachers' unit and lesson plans to ensure that standards are being covered in the classroom.

Another systemic implication to consider is that aligning a curriculum with standards can require rather dramatic changes in the curriculum and textbooks. This is an unforeseen consequence — one that many districts cannot immediately afford to address. One approach is to identify the standards that are already addressed in the current curriculum and fill in gaps over time by enhancing the curriculum as human and financial resources permit (see Laboratory Network Project, 2000).

Q. What implications do standards have for teachers' instructional methods?

Possible Actions

Make sure students, as well as teachers, are focused on standards.

Provide teachers with training on using different instructional strategies to teach different types of knowledge addressed by standards.

Research and experience reveal the importance of ensuring that standards and benchmarks are clearly communicated in each course, unit, and, indeed, each lesson. A recent meta-analysis of 53 research studies (Marzano, 1998) found that when students were clear in advance about what they were learning, their achievement was, on average, 34 percentile points higher on tests used in these studies than students in control groups. This finding suggests that teachers should explicitly make the connection between standards and every lesson they teach. This might be done by posting the standards on the wall, a bulletin board, or chalkboard or writing the relevant standards at the top of each assignment.

Another important issue to consider is that different standards call for students to acquire different types of knowledge. Some standards identify skills (sometimes called *procedural knowledge*) that students will learn, such as reading a map, performing long division, or setting up an experiment. Other standards identify facts, concepts, or generalizations (*declarative knowledge*) that students will learn, such as the concept of a geographic region, the concept of a numerator, or the characteristics of an amoeba. Teaching different types of knowledge requires different instructional strategies. The best teachers are those who expand their repertoire of instructional practices to suit the particular kinds of knowledge addressed by specific standards.

Q. To what extent are teachers able to design standards-based classroom assessments?

During the school day, the people who are closest to students and know them best are teachers. It makes sense, then, that teachers should have the primary responsibility for measuring their students' progress on standards and benchmarks. But it is imperative that teachers know how to design and administer effective in-class assessments. This is true not only because educators need to accurately gauge what students are learning, but also because, as Mitchell (1988) notes, "assessment drives instruction" (p. 2). Poorly designed assessments can drive teaching and learning in the wrong direction.

Possible Actions

Give teachers the training and resources they need to design appropriate classroom assessments.

Give teachers time and opportunities to share testing strategies.

This means, of course, that teachers must use the kinds of assessments that best evaluate the degree to which students have learned the knowledge and skills addressed by state or district standards and benchmarks. Multiple-choice, true-false, and other forced-choice tests can be useful tools to assess students' knowledge of particular facts. But they are probably not the best method for assessing students' understanding of complex concepts. In short, different forms of assessment are appropriate for different types of knowledge. Teachers may need to revise their classroom tests or develop new activities for judging students' progress on standards. Forced-choice tests should not be discarded, but rather supplemented with other forms of assessment, such as essays, performance tasks, student portfolios, and self-assessments.

Personal Domain Implications

Staff Development • Leadership & Supervision • Internal Communication • Climate & Culture

Q. What staff development do teachers need in order to use standards effectively?

Teachers often need a considerable amount of guidance to learn how to implement standards in their classrooms. They may need guidance not only on how to teach standards, but also on how to assess students' progress toward meeting them. In particular, they may need training on how to grade students' progress in meeting individual standards or how to create useful performance tasks. Helping teachers develop these crucial skills usually requires more than a one-day in-service. Teacher study groups, multi-day workshops, and longer-term arrangements with outside professionals may also be required.

Possible Actions

Develop ongoing staff development related to creating effective standards-based classrooms.

Set up teacher study groups to design standards-based lessons and units.

In fact, many school leaders have found that professional development is more effective when it is delivered through teacher study groups. Accomplishing this, however, often requires rethinking organizational structures and soliciting support from the school board to create opportunities for teachers to work together, as discussed in more detail on page 23.

Possible Actions

Observe classrooms to see how well standards are being taught.

Require teachers to link unit and lesson plans to standards.

Q. What leadership support is needed to help us implement standards in the classroom?

Principals whose schools are in the midst of implementing standards say that regularly observing classroom instruction is key to ensuring that all teachers are moving toward standards-based instruction. In particular, it's important to encourage teachers to carefully consider standards when making instructional choices. This feedback can be given in a number of ways — for example, by positively reinforcing teachers who are effectively tying standards to lessons and assessing students' progress on individual standards. Other, more concrete methods can also be effective, for example requiring teachers to specify on their unit and lesson plans which standards and/or benchmarks they are addressing.

At the same time, many school leaders say it is important for leaders to create a climate of trust in the school. Patterson (1993) notes that this can be partly accomplished by allowing staff members to express their perspectives, even if they conflict with organizational direction. Another key is providing a safe environment in which staff members openly and respectfully resolve conflict. School leaders can help to create this kind of climate by modeling these behaviors and by recognizing that they do not diminish their stature as leaders when they open up their organization to diverse perspectives.

Possible Actions

Involve teachers in every phase of reform.

Make standards the overarching reform initiative.

Q. How can we create a school culture that supports standards?

Most teachers, especially veteran teachers, have seen education reform movements come and go. As a result, they may wonder whether the standards movement will fade away, like "open concept" schools or outcomes-based education, and eventually become a footnote in education history. In light of the enormous effort required to implement standards, it's especially important for teachers to understand that standards aren't going away and that, more important, using a standards-based approach will improve student learning.

One way to diffuse resistance to standards is to provide teachers with the training they need to truly implement standards in their classrooms. For example, teachers will most likely need to learn how to move from a traditional grading system to one that is intrinsically focused on standards. This sort of professional development can help set a clear expectation that standards should affect what happens in classrooms and that teachers have a primary role to play in helping students achieve standards.

Experienced school leaders also suggest making it clear that moving toward standards-based classrooms is an overarching reform initiative. This does not mean that a school can have no other improvement initiatives, but rather, that all other reform efforts should support the school's move toward a standards-based system. Casting this kind of spotlight on standards can help communicate the message that standards are important and are part of a new, lasting way of educating students.

Organizational Domain Implications

External Environment • Stakeholders • Resource Allocation • Technology • Accountability

Q. How will we communicate students' progress on standards to stakeholders, in particular to parents?

School leaders may also need to consider how to report students' progress on standards to parents. There are a number of ways to give feedback about students' progress (for a detailed discussion of these approaches, see Marzano & Kendall, 1996, pp. 125–172). One option is to continue to assign letter grades, but to supplement these grades with scores that reflect students' progress toward specific standards addressed in each course. Another approach is to report progress *only* by the individual standards addressed in each course.

Possible Actions

Expand report cards to reflect students' progress in meeting standards.

Report only scores or grades on individual standards.

One difficulty in using this sort of reporting format is that many teachers consider nonacademic factors, such as attendance or participation, when assigning overall grades. Thus, before adopting a standards-based reporting format, school leaders may need to consider whether grades or scores will continue to be assigned for each of these factors. Or they may need to determine the relative importance of these factors compared to academic standards. Although reporting students' mastery of specific standards will no doubt raise questions such as these and require significant changes on the part of teachers, the feedback this approach offers to students and parents can be a valuable means for promoting students' mastery of standards.

Q. How can we better use resources to support the implementation of standards in the classroom?

At the heart of the standards movement is the notion that all students are capable of learning at high levels. For this to occur, districts and schools must be willing to provide extra help to students who do not meet standards at identified transition points. Schools and districts need to be aware of the implications that creating a standards-based system will have on their use of resources. Providing extra help to struggling students often requires reallocating resources to after-school or summer programs or redirecting teachers' time. Obviously, these programs require a significant level of financial support. But, as Marzano and Kendall (1996) point out, these investments are usually worthwhile. Many districts have seen dramatic increases in student achievement after committing to high standards for all students, then ensuring that every student has the opportunity to meet those standards.

Possible Actions

Provide additional learning opportunities for students who do not initially achieve standards.

Reallocate resources used for nonacademic programs.

Also, it is important to recognize that implementing standards in the classroom often requires an enormous investment of staff time to craft new lesson and unit plans, new assessments, and new reporting systems. To help teachers

accomplish these changes, leaders may need to rethink teachers' schedules and responsibilities. They may also need to examine their nonacademic programs and consider creating larger classes in these areas or moving support staff from nonacademic subjects to core subjects. Another option is to refocus nonacademic programs to cover the core academic knowledge and skills identified by standards.

Possible Actions

Create peer review panels to observe the extent to which teachers are creating standards-based classrooms.

Adopt a skills-based pay system that rewards teachers who demonstrate specific skills and competencies.

Q. How can our accountability system provide teachers with adequate incentives?

Providing teachers with training and resources for aligning curricula and classroom assessments with standards is critical. But many school leaders also believe that teachers should be given incentives to do so. One way to accomplish this might be to hold teachers accountable for students' achievement on standards-based assessments. However, this approach is fraught with difficulties given the large margin of error inherent in any single measure of performance and the potential of high-stakes tests to encourage teachers to narrow the curriculum.

A more appropriate and fair way to provide teachers with incentives to implement standards might be to judge their efforts in the classroom. Principals usually are responsible for making these judgements, but all too often they base their evaluations on only one or two limited observations of teachers. A preferable approach might be to use peer evaluation, in which teams of teachers spend time observing teachers and offering constructive criticism. Some school leaders who have adopted this approach say that it not only helps teachers under scrutiny to improve their practices, but also helps those teachers conducting the reviews improve their own practices as well.

Yet another approach might be to adopt a skills- or competency-based pay system, such as the kind described by Odden and Kelley (1995). Under such a system, teachers are rewarded not for degrees earned and years of experience, but rather for their ability to demonstrate skills that the school or district has identified as important. In a standards-based system, these competencies might include the ability to design lesson plans and activities related to standards, to assess students' progress on specific standards, and to give feedback to students on their progress.

Example 2: LINKING STAFF DEVELOPMENT TO STUDENT LEARNING

Professional development often is viewed as simply pulling teachers out of the classroom for a day or two a year to provide them with a "sit-and-get" session on the topic du jour. Many educators now realize that such efforts rarely have much effect on teachers' practices and, more important, on students' learning. Although designing a relevant, effective program is challenging, the rewards for teachers and students are well worth the time and effort. An inservice "obligation" can turn into an important opportunity for gaining new skills and advancing reform efforts. One district official described the benefits of focusing professional development on reform efforts this way:

> *"Teachers have benefitted from in-services on general topics like time management, to be sure. But when we figured out the specific things teachers and staff needed to learn to make reform successful and refocused our professional development efforts on those areas, the payoffs were tremendous. Teachers gained a new level of confidence in the classroom and comfort with reform, which translated into a better climate and, most important, improved student achievement."*

Step 1: Identify the Initiative

Effective professional development is a key component of successful schools and districts. To design an effective professional development program, school leaders need to make sure that every activity is focused on student learning. Schools should be learning communities — not just for students, but for teachers, administrators, and staff members.

For some schools, this may be a departure from the past when professional development was primarily focused on the needs of adults in the school, such as offering teachers sessions on stress management. But as teachers have pointed out, an inservice on stress management often misses the point. Teachers are stressed out because they are under increasing pressure to raise student achievement. So what they really need is help in accomplishing this. In this section, we presume that a school or district has undertaken a needs assessment and decided to focus their efforts on *linking professional development to student learning.*

Step 2: Use Guiding Questions to Create Specific Questions

After identifying the initiative, the guiding question for each domain can be translated into more specific questions, as shown in Exhibit 7. These questions are offered as examples of the kinds of questions school leaders might ask.

Exhibit 7
Step 2: Use Guiding Questions to Create Specific Questions

REFORM INITIATIVE: LINKING STAFF DEVELOPMENT TO STUDENT LEARNING

Guiding question	System components	Specific questions
Technical Domain What are the implications of this initiative for what and how students learn and how we assess their progress?	Standards	How can we ensure that staff development efforts are focused on improving classroom practices (e.g., instruction and assessment)?
	Curriculum	
	Instruction	How can we use student assessment data from both large-scale and classroom assessments to guide staff development?
	Assessment	
Personal Domain Will our attitudes and skills contribute to the success of this initiative?	Staff Development	How can school **leadership** help create a learning community?
	Leadership & Supervision	How can we better use **internal communication processes** to help teachers learn from one another?
	Internal Communication	
	Climate & Culture	How can we create a **school culture** that supports more intensive staff development?
Organizational Domain Will our organizational support systems contribute to the success of this initiative?	External Environment	How can we help **stakeholders** (e.g., parents) understand the importance of devoting more time to staff development?
	Stakeholders	
	Resource Allocation	How can we better use our **resources** (e.g., time) to support staff development efforts?
	Technology	
	Accountability	How can **technology** support staff development?

Step 3: Consider Possible Actions

Revamping staff development to focus on improving student achievement is no small undertaking. In this section, we discuss some lessons that can be learned by thinking systemically about this issue and asking the specific questions listed in Exhibit 7. These lessons are drawn from a variety of sources, including input from school leaders and reviews of relevant literature, including *Professional Development: Learning from the Best: A Toolkit for Schools and Districts Based on Model Professional Development Award Winners* (Hassel, 1999). This joint NCREL/McREL publication offers lessons learned from several sites that have won national recognition for designing staff development programs that boosted student achievement.

Technical Domain Implications

Standards • Curriculum • Instruction • Assessment

Q. How can we make sure staff development efforts are focused on improving classroom practices (e.g., instruction and assessment)?

A key feature of all national professional development award winners is that their staff development efforts have the explicit goal of improving student learning, usually by finding ways to improve classroom practices. Moreover, these activities are integrated into daily activities or can be quickly applied in the classroom. At one model professional development award-winning school, for example, teachers' professional development experiences included formal training as well as on-the-job coaching from outside consultants to help them understand and use specific instructional programs to raise students' literacy scores.

Possible Actions

Target all staff development activities toward enhancing student learning.

Ensure that staff development activities can be readily applied in the classroom.

Q. How can we use student assessment data from both large-scale and classroom assessments to guide staff development?

Student performance data should be used to measure whether changes in teaching practice have improved student achievement. Leaders of schools in which teachers have significantly improved their instructional practices credit the use of assessment results and other forms of data to guide professional development. Test scores and other data can guide the selection of staff development activities by pointing to areas in need of improvement. It's also important to examine various forms of student performance data, including disaggregated data, to determine whether professional development efforts are having a positive effect on *all* student groups.

Possible Actions

Examine student assessment data to identify priority areas for staff development.

Use assessment data to evaluate the impact of staff development efforts.

Supplement quantitative data with qualitative sources of feedback about students' performance.

Although examining assessment data can lead to important insights about areas for improvement, this feedback doesn't always result in a complete picture. For example, low 8th grade science scores could be caused by a wide variety of factors — from a weak curriculum or gaps in earlier curricula to ineffective instructional strategies at one or several grade levels, to poor student test-taking skills. Thus, it's important to gather qualitative data as well, including feedback from faculty meetings and informal conversations with teachers.

Personal Domain Implications

Staff Development • Leadership & Supervision • Internal Communication • Climate & Culture

Possible Actions

Make it clear that all teachers and staff members are expected to participate in professional development activities.

Develop broad-based leadership across the school community.

Q. How can school leadership help create a learning community?

Leadership is crucial in creating a staff development program that is linked to ongoing, improved student learning. In model professional development schools, school leaders foster a culture of inquiry by encouraging debate and discussion among staff and rewarding (often through even more professional development opportunities) those who actively participate in staff development. In one school, the principal emphasized that professional development was "expected of all staff." Yet another school assigned all staff members to serve on school improvement teams that identified issues, conducted research, and made recommendations for improvement.

Experienced school leaders also recognize that a critical dimension of successful reform is *broad-based leadership*. In all too many schools and districts, reform efforts are driven by a single individual or a small cadre of people. Such reforms are likely to fail for two primary reasons: lack of staff support and administrative turnover. Teachers must support staff development programs if they are to realize program goals. Similarly, if the drive and momentum for change rests solely with a single leader, reform will likely come to a screeching halt if the leader leaves. Thus, it's important to embrace an expanded view of leadership that includes people at all levels and areas of the system. In terms of staff development, this could mean, for example, tapping experienced teachers to serve as mentors for novice teachers. For a broader discussion of the qualities of leadership that are needed to sustain school reform, see *Leadership for School Improvement* (McREL, 2000).

Possible Actions

Create teaching teams to foster professional growth and maximize the value of professional development activities.

Q. How can we better use our internal communication processes to help teachers learn from one another?

All too often, teachers spend their days working behind closed doors, isolated from one another's professional knowledge. To reduce isolation and enhance teachers' ability to learn and grow together professionally, some award-winning sites have turned everyday activities, such as classroom planning and teaching, into forums for professional development. Teams of teachers now plan, teach, and evaluate students together. This approach encourages them to exchange ideas and push each other toward excellence. Working in groups also helps them reinforce what they've learned through staff development activities, maximizing the impact of those efforts on student

achievement. To encourage collaboration among teachers, some schools have adopted a 20-80 rule for their professional development efforts — 20 percent of their activities consist of presentations or trainer-led activities, while 80 percent consist of collegial problem solving.

Q. How can we create a school culture that supports more intensive staff development?

Redesigning a professional development program so that it is directly related to student learning undoubtedly will result in changes in a school's established culture. Creating a community in which continuous learning and improvement — on the part of teachers, administrators, and students — is the norm rather than the exception often represents a departure from the past. Schools that have successfully created so-called learning communities have done so through a variety of strategies. Some award-winning sites, for example, have signaled this shift in culture through a succinct, clear, ever-present mission statement and through annual events during which important accomplishments gained through professional development are celebrated.

Possible Actions

Create a clear expectation of continuous learning and improvement.

Use team-teaching strategies to help transform the school culture.

Teachers in award-winning sites also note that team-teaching strategies can transform school culture. If teachers collaborate to improve student achievement, those who are unmotivated or reluctant to change their practices cannot hide. To avoid critical feedback from colleagues, ineffective or apathetic teachers often opt to seek employment elsewhere.

Organizational Domain Implications

External Environment • Stakeholders • Resource Allocation • Technology • Accountability

Q. How can we help stakeholders (e.g., parents) understand the importance of staff development?

Parents and other community members may initially view staff development efforts as simply taking time away from more important things, such as instruction. Thus, it is important to keep stakeholders not only informed about staff development efforts, but also supportive of them.

Possible Actions

Use newsletters, bulletin boards, and school events to keep stakeholders informed about professional development efforts.

Involve parents in planning and participating in professional development activities.

Principals may want to schedule community Q&A sessions — in both large and small groups — to give parents plenty of opportunities to ask questions, air concerns, and discuss implications for their children. Bulletin boards, newsletters, and school events are other avenues for keeping stakeholders informed. Some award-winning schools have provided sessions for parents that are similar to the training teachers received. Still others have sought input from parent advisory committees in planning professional development activities.

Possible Actions

Reorganize class schedules to create blocks of shared preparation time and to facilitate team teaching.

Q. How can we better use our resources (e.g., time) to support staff development?

As noted earlier, creating teaching teams can help foster the exchange of ideas and professional growth among teachers. But creating teacher teams is only the first step. School leaders in award-winning sites emphasize the importance of giving teams adequate time to work together to plan, evaluate, and improve. Doing this may require rethinking organizational structures. Some schools, for example, have reworked their weekly class schedules to create once-a-week early-release afternoons, giving teachers a chance to convene study groups, plan integrated classes, and take time for other collaborative activities.

Possible Actions

Purchase data management software to help teachers use student data to guide and improve their classroom practices.

Use e-mail or Web pages to keep parents informed about staff development efforts and their effect on student learning.

Q. How can technology support staff development?

If teachers are overwhelmed with the time-consuming work of recording and reporting students' scores on assessments, they will have less time to carefully analyze these data and be less likely to identify effective improvement strategies.

To reduce the data management burden on teachers, school leaders may need to consider purchasing electronic student data management systems and budgeting clerical support for data input and management. In addition, e-mail and Web pages can be used to keep parents and community members informed about professional development efforts, thereby increasing stakeholder support for such efforts.

Example 3: Responding to Accountability Demands

Now that most states and districts have adopted standards, the next wave of the standards movement appears to be the development of standards-based accountability systems. A growing number of states are developing assessments tied to standards, and many are linking some form of accountability — from ranking schools to taking over low-performing schools — to results on the tests. In practice, this often means using large-scale assessments to gauge school performance. As one middle school principal noted, this can create a great deal of tension:

> *"We've always held ourselves accountable for student learning. That's not new. But public, external accountability pressures are another matter. The increased attention on results through school report cards and the like has led to a fair degree of uncertainty and stress in our school. Our job as leaders is particularly important now. We have to keep doing what we know works with students and keep looking for new ways to improve. At the same time we have to think about the implications of new external accountability pressures."*

Step 1: Identify the Initiative

As more and more states create high-stakes accountability systems, districts and schools are being increasingly confronted with the need to meet these demands, often by raising student achievement on statewide tests or other measures of performance. In this section, we presume that these demands are making it imperative for a school or district to focus efforts on responding to accountability demands.

Step 2: Use Guiding Questions to Create Specific Questions

The next step of the process is to translate the guiding questions into more specific questions, as shown in Exhibit 8. These questions are offered as examples of the systemwide issues that schools or districts typically must address as they respond to the requirements of new accountability systems. And, as we will see in the following pages, although this initiative begins with the *external environment*, a component of the organizational domain, it has profound implications for the entire system.

Exhibit 8
Step 2: Use Guiding Questions to Develop Specific Questions

REFORM INITIATIVE: RESPONDING TO ACCOUNTABILITY DEMANDS

Guiding question	System components	Specific questions
Technical Domain What are the implications of this initiative for what and how students learn and how we assess their progress?	**Standards**	To what extent is our curriculum aligned with state standards and assessments?
	Curriculum	
	Instruction	To what extent do our instructional methods help us meet accountability demands?
	Assessment	To what extent do teachers' classroom assessments help students prepare for statewide tests?
Personal Domain Will our attitudes and skills contribute to the success of this initiative?	**Staff Development**	How can we better use internal communication processes to help us meet accountability demands?
	Leadership & Supervision	What role can school leadership play in responding to accountability requirements?
	Internal Communication	
	Climate & Culture	How can we mitigate the negative effect that accountability requirements may have on the school climate?
Organizational Domain Will our organizational support systems contribute to the success of this initiative?	External Environment	How can we involve stakeholders, (e.g., parents) in our efforts to respond to accountability demands?
	Stakeholders	
	Resource Allocation	How can we better use staff resources to help us meet accountability requirements?
	Technology	
	Accountability	To what extent does the way we allocate our most valuable resource, time, help us meet accountability demands?

Step 3: Consider Possible Actions

The following guidance on the systemic implications of responding to accountability requirements was drawn from interviews with school leaders, research, and McREL's experiences in the field. Another resource used was *Hope for Urban Education: A Study of Nine High-Performing, High-Poverty, Urban Elementary Schools* (Charles A. Dana Center, 1999), a report of the findings of a U.S. Department of Education-sponsored study to determine how these schools transformed themselves into high-achieving schools.

Technical Domain Implications

Standards • Curriculum • Instruction • Assessment

Q. To what extent is our curriculum aligned with state standards and assessments?

Obviously, students cannot be expected to know what they have not been taught. Yet all too often, classroom instruction is poorly aligned with standards and assessments. Thus, many districts have found it helpful to study the alignment between their standards, curriculum guides, and district or state assessments. In the high-performing schools studied by the Charles A. Dana Center (1999), "principals and teachers did not leave student performance to chance. They meticulously ensured that children were being taught the knowledge, concepts, and skills articulated in state or district standards and measured in annual assessments" (p. 16). In one school in San Antonio, the principal led teachers through an alignment process in which the staff collectively developed a plan to make sure they were covering important content by testing time each spring.

Possible Actions

Determine the extent to which curriculum is aligned with state tests.

Make sure important material is covered prior to high-stakes tests.

Q. To what extent do our instructional methods help us meet accountability demands?

A key component of many accountability systems is that student performance data are disaggregated to determine if all student groups are performing at proficient levels. This emphasis on the performance of all students often means that teachers must alter their current instructional methods to ensure that all students are learning at high levels. For example, teachers may need to learn how students' cultural differences can translate into different learning styles and the need for different forms of instruction. But teachers must do more than *understand* or be tolerant of such differences; they must modify their instruction to better meet the needs of diverse students.

Possible Actions

Disaggregate student performance data to determine if teachers need to alter instruction methods to better serve certain student groups.

Provide teachers with necessary training to help all groups of students meet high standards of learning.

For example, in light of research (see, e.g., Gay, 2000) indicating that nonminority students are engaged more often in class than are minority students, teachers may need to rethink how they manage classroom discussions to encourage more students to participate. For more on how to better serve diverse students, see *Including Culturally and Linguistically Diverse Students in Standards-Based Reform* (McREL, 1999) and *Including At-Risk Students in Standards-Based Reform: A Report on McREL's Diversity Roundtable II* (McREL, 2000).

Possible Actions

Use classroom assessments to improve students' test-taking skills.

Encourage teachers to give classroom assessments, or portions of their assessments, in the same format as large-scale assessments.

Q. To what extent do teachers' classroom assessments help students prepare for statewide tests?

Classroom assessments can be valuable tools for assessing students' readiness for large-scale assessments and preparing students to take these tests. Some schools found that students' test scores dramatically improved after teachers focused on familiarizing students with the types of items they were likely to encounter on large-scale tests. For example, a high-poverty school in Pueblo, Colorado, dramatically increased students' scores after school leaders realized that large-scale assessments are a different form of information recall than their students typically were encountering in the classroom. This realization led teachers to make sure that their own tests included the same question formats as those on the state assessment. Helping students become more familiar with the high-stakes test format alleviated their test anxiety, allowing them to better demonstrate their knowledge and skills (Bingham, 1998).

This does not mean, however, simply showing students how to fill in bubbles or guess more accurately. Rather, it means using day-to-day tests and quizzes to help students practice using the kind of answer formats found on the statewide assessment (e.g., complete-sentence and essay-length answers). As one teacher put it, they are now "teaching students to communicate in writing about what they are reading. We never assume that they know. They must prove it to us every day" (Bingham, 1998, p. 6B).

Personal Domain Implications

Staff Development • *Leadership & Supervision* • *Internal Communication* • *Climate & Culture*

Possible Actions

Use well-guided, regular meetings to open communication lines and create and maintain a common focus among teachers.

Use horizontal (same grade level) and vertical (different grade levels) planning meetings to help teachers share effective strategies.

Q. How can we better use internal communication processes to help us meet accountability requirements?

Leaders of successful schools say that creating a positive environment in which teachers work together to meet a common challenge is essential to improving student performance. This often entails enhancing communication between administrators and teachers. A principal of one high-performing, high-poverty elementary school in Boston used regular meetings with teachers to keep the focus on improving student literacy (Charles A. Dana Center, 1999). Teachers noted that this clear focus on literacy unified the school and helped boost student achievement. The mandatory meetings helped them keep their focus on improving literacy and maintaining consistency in their approaches to reading instruction, which, in turn, benefitted students.

At another high-performing, high-poverty, urban elementary school in Texas, the principal rearranged class schedules so teachers could engage in both horizontal (same grade level) and vertical (different grade levels) planning (see

Charles A. Dana Center, 1999). The entire school staff also came together twice a week to share experiences and strategies that positively affected students. School leaders, of course, have to balance the use of these meetings, making them structured enough to be productive, yet flexible enough to encourage open communication among teachers.

Q. What role can school leadership play in responding to accountability requirements?

Effective school leaders understand the importance of keeping staff members focused on students. At the nine high-poverty, high-performing schools recently studied (see Charles A. Dana Center, 1999), leaders found ways to redirect time and energy spent dealing with conflicts between adults in the school toward the common goal of serving children. School leaders can help create such a staff in part by encouraging everyone to put aside their differences, modeling a willingness to resolve differences quickly and fairly, and keeping the focus on helping students.

Possible Actions

Focus staff energy on helping students.

Devote more time to instructional leadership.

Use skilled veteran teachers as instructional leaders.

Q. How can we mitigate the negative effect that accountability requirements may have on school climate?

School leaders can also help by spending more time as instructional leaders. The principal at one of the nine schools studied by the Dana Center reported that she spent 40 percent of her time in teacher's classrooms observing teachers and helping them improve their instruction. These successful school leaders also found ways to extend instructional leadership to veteran teachers. For example, the principal of one school freed up a highly skilled teacher for an entire year to work with other teachers to help them improve their instructional methods.

School leaders need to address the discouragement among teachers, students, and parents that can result from poor test results. They also need to acknowledge that teachers may have negative attitudes about high-stakes assessments. It's best to get the concerns out in the open.

But it's also important not to linger too long on misgivings about tests. Rather, teachers should be encouraged to see the tests, flawed though they may be in some cases, as a means for helping students. In particular, test scores can help focus and clarify school improvement goals and create a sense of urgency about improving curricula and instruction. In this way, test results can be an impetus for creating better staff development and teacher study groups, which can help bring about a more positive school culture and foster motivation for improvement. The key, say school leaders, is to discover solutions together and, thus, keep the focus on the future, not the past.

Possible Actions

Use test results as an impetus for school improvement efforts.

Keep the focus on continuous improvement, not past failures.

Organizational Domain Implications

External Environment • *Stakeholders* • *Resource Allocation* • *Technology* • *Accountability*

Possible Actions

Encourage parent support by demonstrating tangible ways teachers and staff are working to improve student success.

Provide meaningful ways for parents to aid student learning.

Q. How can we involve stakeholders (e.g., parents) in our efforts to respond to accountability demands?

High-performing schools find ways to involve parents in their school improvement efforts. One of the best ways to get parent support is by first improving student achievement. This may seem to go against conventional wisdom, which says that parent involvement leads to improved achievement. However, leaders of the nine schools studied by the Dana Center (1999) say the opposite also seems to be true — increased student achievement leads to increased parent involvement. When parents see their children doing better thanks to the extra efforts of school staff, they tend to become more willing to support the school.

It's important to follow up on this initial outpouring of support by engaging in a variety of efforts to win the confidence and respect of parents. This means going beyond simply involving parents in token activities and instead giving them tangible ways to contribute to their children's success. For example, a San Antonio, Texas, school videotaped classrooms to give parents a first-hand look at what their children were learning in school, which in turn, helped parents see how they could extend students' learning at home. Parents at an East St. Louis, Illinois, school were invited to family math and science nights, where they learned ways to help their students learn more at home.

In designing these efforts, it's important to find ways to involve the parents of all students. All too often, the parents of language minority students, for example, are reluctant to come to school events because of their lack of English fluency. Yet their children may have the most to gain from a stronger connection between the school and their parents. Thus, schools need to find ways to reach out to these parents, often in creative ways, such as sponsoring community events of interest to parents or bringing other services, such as health care, counseling, and other social services to their campuses (Minicucci et al., 1995).

Q. How can we better use staff resources to help us meet accountability requirements?

A number of schools that have successfully met the challenges of external accountability requirements have found ways to redistribute their staff in order to create smaller class sizes. For example, in one Colorado school, "pull-out" teachers were reassigned to classrooms, thereby reducing the school's average class size from 25 to 20 students (Bingham, 1998). School leaders say smaller class sizes contributed to a five-fold increase in the number of students testing at proficient levels on the statewide reading and writing assessment.

Possible Actions

Redistribute staff to create smaller class sizes.

Find ways to involve all school staff members in instructional activities.

Given the emphasis statewide accountability systems are placing on reading scores, many schools have also found ways to create even better teacher-student ratios during reading blocks. During these times, all the adults in the school — including administrators, physical education, art, music, and library teachers — work with students to improve their reading skills. In this way, they are able to give struggling students much more individualized attention, including one-on-one tutoring (see Laboratory Network Program, in press).

Q. To what extent does the way we allocate our most valuable resource, time, help us meet accountability demands?

In attempting to improve instructional practices, school leaders often have found it necessary to reallocate their use of time. Several successful elementary schools have created large blocks of time, sometimes as much as two hours, to focus on specific content areas. For example, an elementary school in Cheverly, Maryland, scheduled two hours every day for reading instruction. This block was considered "sacred" — even if inclement weather shortened the school day, leaders made sure students still received two hours of reading instruction.

Possible Actions

Create blocks of instructional time devoted to targeted student needs, such as literacy skills.

Create longer blocks of instructional time.

Some school leaders also have found that traditional class periods are too short to accommodate in-depth, standards-based learning. They have opted for alternatives, such as block scheduling in which students remain in the same classroom for longer periods, typically 90 minutes. Of course, without adequate training, teachers may be resistant to longer class periods or lack the skills to use the extra time productively (e.g., by engaging students in small-group or self-guided learning). As a result, they may turn the 90-minute periods into marathon lectures, which may only serve to enhance students' doodling skills.

References

Beckhard, R., & Pritchard, W. (1992). Changing the essence: *The art of creating and leading fundamental change in organizations.* San Francisco: Jossey-Bass.

Bingham, J. (1998, October 4). Test scores jolt school into action. *Denver Post*, p. 1B, 6B.

Charles A. Dana Center, University of Texas at Austin. (1999). *Hope for urban education: A study of nine high-performing, high-poverty, urban elementary schools.* Washington, DC: U.S. Department of Education, Planning and Evaluation Service.

Cordell, F., & Waters, J.T. (1993). I*mproving student performance: New strategies for implementing higher standards*. Greeley, CO: The Center for Peak Performing Schools.

Dolan, M. (n.d.). *The plight of Hawaii's rainforest: Sad aloha to native species.* San Francisco: Stevenson Press. (Online): http://www.stevensonpress.com/Hawaii.html.

Doyle, W. (1992). Curriculum and pedagogy. In P. W. Jackson (Ed.), *Handbook of research in curriculum* (pp. 486–516). New York: Macmillan.

Fuhrman, S. (1999). *The new accountability*. Philadelphia: Consortium for Policy Research in Education.

Gay, G. (2000). Improving the achievement of marginalized students of color. In McREL (Ed.), *Including at-risk students in standards-based reform: A report on McREL's Diversity Roundtable II.* Aurora, CO: Mid-continent Research for Education and Learning.

Hassel, B. (1998). *Comprehensive school reform: Making good choices: A guide for schools and districts.* Oak Brook, IL: North Central Regional Educational Laboratory.

Hassel, E. (1999). *Professional development: Learning from the best: A toolkit for schools and districts based on the National Awards Program for Model Professional Development.* Oak Brook, IL: North Central Regional Educational Laboratory.

Kelley, C., & Odden, A. (1995). *Reinventing teacher compensation systems.* Philadelphia: Consortium for Policy Research in Education.

Laboratory Network Program. (in press). *Education reform: What works for districts.* Aurora, CO: Mid-continent Research for Education and Learning.

Marzano, R. J. (1998). *A theory-based meta-analysis of research on instruction.* Aurora, CO: Mid-continent Regional Educational Laboratory.

Marzano, R. J., & Kendall, J. S. (1996). A *comprehensive guide to designing standards-based districts, schools, and classrooms.* Aurora, CO: Mid-continent Regional Educational Laboratory.

Marzano, R. J., & Kendall, J. S. (with Gaddy, B. B.). (1999). *Essential knowledge: The debate over what American students should know.* Aurora, CO: McREL Institute.

McREL. (1999). *Including culturally and linguistically diverse students in standards-based reform: A report on McREL's Diversity Roundtable I.* Aurora, CO: Mid-continent Research for Education and Learning.

McREL. (Ed.). (2000). *Including at-risk students in standards-based reform: A report on McREL's Diversity Roundtable II.* Aurora, CO: Mid-continent Research for Education and Learning.

McREL. (2000). *Leadership for school improvement.* Aurora, CO: Author. Also available through the World Wide Web at www.mcrel.org/products/school-improve/leadership.asp

McREL. (in press-b). *Whole school reform toolkit.* Aurora, CO: Author.

Minicucci, C., Berman, P., McLaughlin, B., McLeod, B., Nelson, B., & Woodworth, K. (1995). School reform and student diversity. *Phi Delta Kappan, 77*(3), 77–80.

Mitchell, R. (1988). *Testing for learning: How new approaches to evaluation can improve American schools.* New York: The Free Press.

Ohle, N., & Morley, C. L. (1994). *How to solve typical school problems.* Alexandria , VA: Association for Supervision and Curriculum Development.

Patterson, J. L. (1993). *Leadership for tomorrow's schools.* Alexandria, VA: Association for Supervision and Curriculum Development.

Stodolosky, S. S. (1989). Is teaching really by the book? In P.W. Jackson & S. Haroutunian-Gordon (Eds.), *Eighty-ninth yearbook of the National Society for the Study of Education, Part I* (pp. 50–89). Norwood, NJ: Ablex.

Yoon, B., Burstein, L., & Gold, K. (n.d.). *Assessing the content validity of teacher's reports of content coverage and its relationships to student achievement.* (CSE Report No. 328). Los Angeles: Center for Research in Evaluating Standards and Student Testing, University of California.

U.S. Department of Education
Office of Educational Research and Improvement (OERI)
National Library of Education (NLE)
Educational Resources Information Center (ERIC)

NOTICE

Reproduction Basis

	This document is covered by a signed "Reproduction Release (Blanket)" form (on file within the ERIC system), encompassing all or classes of documents from its source organization and, therefore, does not require a "Specific Document" Release form.
X	This document is Federally-funded, or carries its own permission to reproduce, or is otherwise in the public domain and, therefore, may be reproduced by ERIC without a signed Reproduction Release form (either "Specific Document" or "Blanket").